

Application No. 09/812,906
Supplemental Amendment dated June 9, 2006

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AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A form, comprising:

a surface;

a position-coding pattern located on the surface and detectable by an optical sensor,

wherein each position is encoded by directions of displacements between a plurality of marks and grid points;

a form layout on the surface indicating at least one entry field for receipt of information; and

an identity pattern on the surface indicating positions on the surface that may be marked to identify the form layout.

2. (Original) The form of claim 1, wherein the identity pattern comprises a bar code.

3. (Original) The form of claim 1, wherein the identity pattern comprises a bar code that prevents the optical sensor from detecting the position-coding pattern on portions of the surface covered by bars of the bar code but allows the optical sensor to detect the position-coding pattern between the bars of the bar code.

4. (Original) The form of claim 1, wherein the identity pattern also indicates a scale of the form layout.

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5. (Original) The form of claim 1, wherein the identity pattern comprises a box for receipt of a cross.

6. (Original) The form of claim 1, wherein the entry field comprises a shape to be marked.

7. (Original) The form of claim 1, wherein the entry field comprises a scale that can be marked at a location to indicate a numerical rating.

8. (Original) The form of claim 1, wherein the entry field comprises space for receiving handwritten information.

9. (Previously Presented) A method for generating a form, comprising:

printing on a surface a position-coding pattern detectable by an optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and grid points to code different symbol values;

printing on the surface a form layout indicating at least one entry field for receipt of information; and

printing on the surface an identity pattern indicating positions on the surface whose arrangement identifies the form layout.

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10. (Original) The method of claim 9, wherein printing on the surface the form layout comprises printing the form layout at a known location relative to the position-coding pattern.

11. (Original) A printer adapted to perform the method of claim 9.

12. (Original) A computer-readable medium having computer-executable instructions for performing the method of claim 9.

13. (Previously Presented) A method for generating a form, comprising:

on a surface having a position-coding pattern detectable by an optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and grid points to code different symbol values, printing a form layout indicating at least one entry field for receipt of information; and

printing on the surface an identity pattern indicating positions on the surface whose arrangement identifies the form layout.

14. (Original) The method of claim 13, wherein printing on the surface the form layout comprises printing the form layout at a known location relative to the position-coding pattern.

15. (Original) A computer-readable medium having computer-executable instructions for

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performing the method of claim 13.

16. (Previously Presented) A method for processing a form, comprising:

receiving from an optical sensor position data corresponding to movement of a device containing the optical sensor over a surface having a position-coding pattern detectable by the optical sensor, wherein the position coding pattern utilizes directions of displacements between a plurality of marks and grid points to code different symbol values;

determining from the position data a form layout printed on the surface; and

determining from the position data an information entry in an entry field defined by the form layout.

17. (Original) The method of claim 16, further comprising storing the information entry in a database.

18. (Original) The method of claim 16, further comprising:

translating the information entry into a non-handwritten format based on a type of information expected to be received in the entry field; and

storing the translated information entry in a database.

19. (Original) The method of claim 16, further comprising:

translating the information entry into a result of a type chosen from the group

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consisting of Boolean variable, whole number, real number, and text string; and
storing the result in a database.

20. (Original) The method of claim 16, wherein determining from the position data the form layout printed on the surface comprises:

determining a sub-portion of the position data located in a predetermined area of the position-coding pattern;

finding a match to the sub-portion in a plurality of known identity patterns representing possible form layouts; and

determining the form layout corresponding to the match.

21. (Original) The method of claim 16, wherein determining from the position data the information entry in the entry field defined by the form layout comprises determining a sub-portion of the position data whose location falls in an area of the position-coding pattern known to be encompassed by the entry field.

22. (Original) A computer-readable medium having computer-executable instructions for performing the method of 16.

23. (Previously Presented) A method for electronically collecting information from forms, the method comprising:

providing a user with a form, the form containing printed indicia on a foreground

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thereof prompting the user to associate written information with the printed indicia, wherein the form further includes preprinted coded information in the background thereof, wherein the preprinted coding information utilizes the directions of displacements between a plurality of marks and grid points to code different symbol values;

encouraging the user to fill in portions of the form using an implement capable of marking the form, the implement being further capable of detecting the preprinted coded information over which the implement passes and generating a signal in response thereto; and

electronically receiving the signal and translating the signal into information reflecting an intention of the user.

24. (Original) The method of claim 23, further including storing in a database the information reflective of the user's intention.

25. (Original) The method of claim 23, herein the form is printed on a material chosen from the group consisting of paper stock, plastic, and laminate.

26. (Original) The method of claim 23, herein the written information is hand-written.

27. (Original) The method of claim 23, wherein the implement is in the form of a pen having an optical code reader therein.

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28. (Previously Presented) The form of claim 1, wherein each mark is uniquely associated with a grid point.

29. (Previously Presented) The form of claim 1, wherein the grid points are derived from the marks.

30. (Previously Presented) The form of claim 1, wherein a single mark contributes to at least two different positions.

31. (Previously Presented) The form of claim 1, wherein the grid points are undetectable by the optical sensor.

32. (Previously Presented) The form of claim 1, wherein the plurality of marks comprises dots.

33. (Previously Presented) The method of claim 16, wherein the plurality of marks comprises dots.

34. (Previously Presented) The method of claim 23, wherein the plurality of marks comprises dots.

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35. (New) The form of claim 1 wherein the position coding pattern includes a mark present at every grid point.

36. (New) The method of claim 9 wherein the position coding pattern includes a mark present at every grid point.

37. (New) The method of claim 13 wherein the position coding pattern includes a mark present at every grid point.

38. (New) The method of claim 16 wherein the position coding pattern includes a mark present at every grid point.

39. (New) The method of claim 23 wherein the position coding pattern includes a mark present at every grid point.